

CLAIMS

I claim:

1. A device for servicing vehicles having tires, the device comprising:
 - a fork for inserting under the tire, the fork having a first working end and a second end;
 - a handle having a first end mounted to the second end of the fork and a second free end;
 - an axle mounted to the fork;
 - a first wheel and a second wheel rotatably mounted on the axle;
 - a spring having a first end mounted to the axle and a second end;and
 - a third wheel mounted to the second end of the spring.
2. The device as recited in claim 1, further comprising a hollow cylindrical sleeve mounted to the second end of the fork for receiving the handle.
3. The device as recited in claim 1, further comprising a first set of gussets mounted beneath the fork and a second set of gussets mounted beneath the fork, wherein the first and second set of gussets are adapted to provide a set of gaps beneath the fork.
4. The device as recited in claim 3, wherein the axle is mounted in the set of gaps.
5. The device as recited in claim 1, wherein the spring comprises a coil spring.
6. The device as recited in claim 1, wherein the third wheel comprises a caster having a roller bearing, and wherein the second end of the spring is mounted to the roller bearing.

7. The device as recited in claim 1, wherein the fork comprises two arms, each arm having a lower end and an upper end, where the arms are connected at their upper ends wherein the arms define a first angle.

8. The device as recited in claim 7, wherein the first angle is an angle between about 15 degrees and about 30 degrees.

9. The device as recited in claim 7, wherein each arm comprises an upper first segment, a middle second segment disposed at a second angle with respect to the upper first segment, and a lower third segment disposed at a third angle with respect to the middle second segment.

10. The device as recited in claim 1, wherein the vehicle is a truck.

11. A method for removing a tire and rim from a hub assembly of a vehicle using the device recited in claim 1, the hub assembly having a plurality of lugs to which the hub is mounted, the method comprising:

raising the vehicle wherein the tire and rim are raised to provide access to the bottom of the tire;

inserting the first working end of the fork under the tire;

depressing the second free end of the handle wherein the first working end of the fork contacts the bottom of the tire wherein the weight of the tire is unloaded from the lugs; and

transporting the tire away from the vehicle wherein the tire rim is removed from the lugs to allow for servicing of one of the tire, rim, and vehicle.

12. The method as recited in claim 11, wherein the vehicle includes a plurality of lug nuts mounted on the lugs, wherein the method further comprises removing the lug nuts.

13. The method as recited in claim 11, wherein depressing the second free end of the handle comprises manually depressing the second free end of the handle.

14. The method as recited in claim 11, wherein transporting the tire comprises rolling the tire away from the vehicle by placing one hand on the top of the tire and one hand on the second free end of the handle.

15. The method as recited in claim 12, wherein transporting the tire away from the vehicle comprises rolling the tire away from the vehicle using the first, second, and third wheels of the device.

16. The method as recited in claim 15, wherein the third wheel is mounted on a roller bearing, and wherein rolling the tire away from the vehicle is practiced by swiveling the third wheel on the roller bearing.

17. A method for mounting a tire on to tire mounting lugs of a vehicle using the device recited in claim 1, the tire having a rim with mounting holes, the method comprising:

- raising the vehicle to provide access to the lugs;
- mounting the tire onto the first working end of the fork;
- transporting the tire to the vicinity of the lugs;
- depressing the second free end of the handle wherein the first working end raises the tire and rim to align the mounting holes of the rim with the lugs; and
- mounting the tire onto the mounting lugs.

18. The method as recited in claim 17, wherein depressing the second free end of the handle comprises manually depressing the second free end of the handle.

19. The method as recited in claim 17, wherein transporting the tire comprises placing one hand on the top of the tire and one hand on the second free end of the handle and rolling the tire toward the lugs.

20. The method as recited in claim 12, wherein the device comprises a third wheel mounted on a roller bearing, and wherein transporting the tire comprises rolling the tire on at least the third wheel and swiveling the third wheel on the roller bearing.